

CLAIMS

[c1] *SAC* A mobile switching center (MSC) configured for supporting wireless communication between a code division multiple access (CDMA) radio access network (RAN) and both a GSM core infrastructure and an IS-41 core infrastructure, comprising:

a first circuit communicating with the CDMA RAN, the first circuit communicating with the IS-41 core infrastructure using IS-41 protocol; and

a second circuit communicating with the CDMA RAN, the second circuit communicating with the GSM core infrastructure using GSM protocol.

[c2] 2. The MSC of Claim 1, wherein the first or second circuit is selected based on at least one message from a mobile station (MS).

3. The MSC of Claim 2, wherein the message is a location message.

4. The MSC of Claim 3, wherein the location message includes an international mobile subscriber identifier (IMSI).

5. The MSC of Claim 4, wherein the MSC uses the IMSI to determine in which core infrastructure the MS has a subscription.

[c6] 6. A state machine mobile switching center (MSC) configured for supporting wireless communication between a code division multiple access (CDMA) radio access network (RAN) and both a GSM core infrastructure and an IS-41 core infrastructure, comprising:

a state machine selectively configurable to communicate with the IS-41 core infrastructure using IS-41 protocol or with the GSM core infrastructure using GSM protocol, based on at least one identifier received from at least one MS.

[c7] 7. The MSC of Claim 6, wherein the identifier is included in at least one message from the MS.

[c8] 8. The MSC of Claim 7, wherein the message is a location message.

[c9] 9. The MSC of Claim 8, wherein the location message includes an international mobile subscriber identifier (IMSI).

[c10] 10. The MSC of Claim 9, wherein the MSC uses the IMSI to determine in which core infrastructure the MS has a subscription, the MSC configuring itself accordingly.

[c11] 11. A communication system, comprising:
a CDMA RAN;
a GSM core infrastructure;
a CDMA core infrastructure; and
an MSC interconnecting the CDMA RAN with both infrastructures.

[c12] 12. The system of Claim 11, wherein the MSC includes:
a first circuit communicating with the CDMA RAN and with the IS-41 core infrastructure using IS-41 protocol; and
a second circuit communicating with the CDMA RAN and with the GSM core infrastructure using GSM protocol.

[c13] 13. The system of Claim 12, wherein the first or second circuit is selected based on at least one message from a mobile station (MS).

[c14] 14. The system of Claim 13, wherein the message is a location message.

[c15] 15. The system of Claim 14, wherein the location message includes an international mobile subscriber identifier (IMSI).

[c16] 16. The system of Claim 15, wherein the MSC uses the IMSI to determine in which core infrastructure the MS has a subscription.

[c17] 17. The system of Claim 11, wherein the MSC is a state machine selectively configurable to communicate with the IS-41 core infrastructure using IS-41 protocol and with the GSM core infrastructure using GSM protocol, based on at least one identifier received from at least one MS.

[c18] 18. A method for effecting communication with a first wireless mobile station (MS) having a subscription in a GSM core infrastructure and with a second wireless MS having a subscription in a CDMA infrastructure without requiring either MS to have more than a single subscription, comprising:

receiving, at an MSC, at least one identifier from at least one MS;

based on the identifier, determining the core infrastructure in which the MS has a subscription;

undertaking, through the MSC, authentication with the MS using information from the core infrastructure in which the MS has a subscription; and

collecting accounting data using the core infrastructure in which the MS has a subscription.

19. The method of Claim 18, wherein the receiving act is undertaken using a CDMA RAN.

[c20] 20. The method of Claim 18, wherein the identifier is an IMSI.

[c21] 21. The method of Claim 18, further comprising billing a user of an MS using the accounting data collected by the associated core infrastructure.

[c22] 22. The method of Claim 18, comprising, based on the determining act:
using GSM protocol in at least part of the authenticating act when the MS has a subscription in the GSM core infrastructure, and otherwise using IS-41 protocol in at least part of the authenticating act when the MS has a subscription in the CDMA core infrastructure.

[c23] 23. A mobile switching center for a wireless communication system, comprising:
means for receiving an identifier from an MS;
means for using the identifier to determine whether the MS has a subscription in a GSM core infrastructure or a CDMA core infrastructure; and
means for communicating with both core infrastructures.

[c24] 24. A wireless mobile station (MS), comprising:
at least one storage device including an identifier;
at least one radio communicating the identifier to a CDMA radio access network (RAN);
and
one and only subscription in a GSM core infrastructure.

[c25] 25. The MS of Claim 24, wherein the MS communicates with a mobile switching center (MSC) using the CDMA RAN and execute authentication with the GSM core infrastructure while the MS is located in an area serviced by a CDMA core infrastructure.

[c26] 26. The MS of Claim 24, wherein the identifier is an international mobile subscriber identifier (IMSI).

[c27] 27. The MS of Claim 26, wherein the MS sends the IMSI as part of a location update message.